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10/762,944

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Alexander J. Somogyi

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FLIESLER MEYER LLP  
650 CALIFORNIA STREET  
14TH FLOOR  
SAN FRANCISCO, CA 94108

EXAMINER

DAVE, JYOTI D

ART UNIT

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2191

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/762,944	<b>Applicant(s)</b> SOMOGYI ET AL.	
	<b>Examiner</b> JYOTI D. DAVE	<b>Art Unit</b> 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5pgs/04/21/06 2pgs/03/14/08</u>                               | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-10 of U.S. Patent Application (Pub. No. US 2004/0215594 A1). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

3. Claims 1-10 of the instant application contains every element of Claims 1-10 of US App. Pub. No. 2004/0215594 A1, respectively. Claims 1-10 of the instant application refer to a method for transaction processing with parallel execution, whereas Claims 1-10 of US App. Pub. No. 2004/0215594 A1 refer to a system for transaction processing with parallel execution. Therefore, US App. Pub. No. 2004/0215594 A1 anticipates the claims of the instant application.

Claims 1-10 of the instant application therefore is not patently distinct from the earlier patent claim and as such is unpatentable over obvious type double patenting.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**In reference to Claims 6,**

Claim 6 recites the limitations "the two-phase", "the primary thread", there are insufficient antecedent basis for these limitations in these claims.

**In reference to Claims 7,**

Claim 7 recites the limitation "the two-phase", there is insufficient antecedent basis for this limitation in the claim.

**In reference to Claim 10,**

Claim 10 recites the limitation "the first and second", there is insufficient antecedent basis for this limitation in the claim.

Dependent claims 8 and 9 are also rejected under the same reasoning as their respective independent claims.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doolittle et al. (6,898,617 B2) in view of Parallel Execution: Oracle8i Concepts Release 8.1.5 (1999) and in further view of Motomura (5,815,727).

**In reference to Claim 1:**

**Doolittle discloses:**

**(Original): A method for implementing a two-phase commit protocol, comprising:**

**dispatching a first operation from a first thread to a second thread (see Fig. 3a, Primary**

thread pool. See also, Col. 2, liens 50-65, receiving a request to be processed by a thread pool), **the second operation associated with a second resource** (see paragraph 0044-0047, at a client session a request (i.e. first operation) is sent to a thread and a client session is represented by a session data structure, which is used to store information relating to a particular client session).

**processing a second two-phase commit protocol operation by the first thread** (see Fig. 3b, Primary thread pool. See also, Col. 2, liens 50-65, receiving a request to be processed by a thread pool), **the first operation associated with a first resource** (see paragraph 0044-0047, at a client session a request (i.e. first operation) is sent to a thread and a client session is represented by a session data structure, which is used to store information relating to a particular client session);

**determining the first two-phase commit protocol operation is complete** (see paragraph 0054, the state of the request can indicate Complete, specifying that the request completed successfully).

Doolittle does not disclose the operation being **a two-phase commit protocol or the two phase commit protocol associated with a first phase of two phase commit protocol**. However, the article Parallel Execution Oracle8i Concepts Release 8.1.5 discloses a two phase commit protocol operation being executed in a parallel fashion (see page 36, Section Transaction Model for Parallel DML, subsection Two Phase Commit, A parallel DML operation is executed by more than one independent parallel process transaction. In order to ensure user-

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level transaction atomicity, the coordinator uses a two phase commit protocol to commit the changes performed by the parallel process transaction). It was well known in the art at the time of the invention that parallel processing could be accomplished through the use of a plurality of threads in parallel (see Motomura, Abstract). Since the article Parallel Execution Oracle8i Concepts Release 8.1.5, discloses a two phase commit protocol operations being executed in a parallel fashion, it would have been obvious to one skilled in the art to execute the parallel processing of the two phase commit operations using multiple threads since at the time of the invention parallel processing using multiple threads was known and common. It would have also been obvious to one skilled in the art to use the method disclosed in Doolittle to execute the parallel processing using multiple threads because the invention by Doolittle discloses a way of managing thread pools which is more efficient simpler and less expensive than previous approaches (see Doolittle, paragraph 0010).

It would also be obvious to one skilled in the art that the two phase commit protocol is associated with the first phase of the two phase commit protocol. It was known at the time of the invention by one of ordinary skill in the art that the two phase commit protocol consists of two phases, the prepare and commit phase. It would be obvious that the two phase commit protocol operation is associated and must execute the first phase in order to complete the two phase commit protocol operation.

**In reference to claim 2,**

Doolittle discloses:

**(Original): The method of claim 1 further comprising:**

**selecting an idle server thread to process the first two-phase commit protocol operation** (see paragraph 0044, when a client sends a request to a server to be processed, the server obtains an available thread (i.e. an idle thread) from a selected thread pool in order to process the request).

**In reference to claim 3,**

Doolittle discloses:

**(Original): The method of claim 2, wherein selecting includes:**

**determining available server threads in a server** (see paragraph 0051, the SRB code is used to dispatch the request to an available thread from an eligible pool. Thus, it checks the eligible pools and dispatches the request onto an available service thread of an eligible pool or puts the request on a global queue).

**In reference to claim 4,**

Doolittle discloses:

**(Original): The method of claim 3 wherein a thread pool manager determines the available server threads** (see paragraph 0051, the SRB code is used to dispatch the request to an available thread from an eligible pool. Thus, it checks the eligible pools and dispatches the request onto an available service thread of an eligible pool or puts the request on a global queue).



**In reference to claim 5,**

Doolittle discloses:

**(Original): The method of claim 1 further comprising:**

**reporting results of the first and second two-phase commit protocol to a log** (see paragraph 0054, state of request can include completed, failed or cancelled)

**In reference to claim 6,**

Doolittle discloses:

**(Original): A method for processing N two-phase commit protocol operations, comprising:**

**processing operations in a first server thread** (see Fig. 3a, Primary thread pool. See also, Col. 2, lines 50-65, receiving a request to be processed by a thread pool), **wherein the processing for each of operation includes:**

**dispatching the operation to a second server thread if a second server thread** (see Fig. 3b, operation on a second server thread) **is determined to be available** (see paragraph 0051, the SRB code is used to dispatch the request to an available thread from an eligible pool. Thus, it checks the eligible pools and dispatches the request onto an available service thread of an eligible pool or puts the request on a global queue); **and**

**processing the operation in the primary thread if no second server thread is determined to be available** (see paragraph 0074, if no thread is available, the request gets put on a queue and when a thread is available the queue is checked to process the next request); **and**

**processing the remaining two-phase commit protocol operation in the first server thread** (see paragraph 0074, if no thread is available, the request gets put on a queue and when a thread is available the queue is checked to process the next request).

Doolittle does not disclose the operation being **a two-phase commit protocol**. However, the article Parallel Execution Oracle8i Concepts Release 8.1.5 discloses a two phase commit protocol operation being executed in a parallel fashion (see page 36, Section Transaction Model for Parallel DML, subsection Two Phase Commit, A parallel DML operation is executed by more than one independent parallel process transaction. In order to ensure user-level transaction atomicity, the coordinator uses a two phase commit protocol to commit the changes performed by the parallel process transaction). It was well known in the art at the time of the invention that parallel processing could be accomplished through the use of a plurality of threads in parallel (see Motomura, Abstract). Since the article Parallel Execution Oracle8i Concepts Release 8.1.5, discloses a two phase commit protocol operations being executed in a parallel fashion, it would have been obvious to one skilled in the art to execute the parallel processing of the two phase commit operations using multiple threads since at the time of the invention parallel processing using multiple threads was known and common. It would have

also been obvious to one skilled in the art to use the method disclosed in Doolittle to execute the parallel processing using multiple threads because the invention by Doolittle discloses a way of managing thread pools which is more efficient simpler and less expensive than previous approaches (see Doolittle, paragraph 0010).

**In reference to claim 7,**

Doolittle discloses:

**(Original): The method of claim 6 wherein dispatching the two-phase commit protocol operation to a second server thread includes:**

**determining available server threads in a server** (see paragraph 0051, the SRB code is used to dispatch the request to an available thread from an eligible pool. Thus, it checks the eligible pools and dispatches the request onto an available service thread of an eligible pool or puts the request on a global queue); **and**

**selecting one of the available server threads to be the second server thread** (see paragraph 0044, when a client sends a request to a server to be processed, the server obtains an available thread (i.e. an idle thread) from a selected thread pool in order to process the request)..

**In reference to claim 8,**

Doolittle discloses:

**(Original): The method of claim 7 wherein a thread pool manager determines the available server threads** (see paragraph 0051, the SRB code is used to dispatch the request to an available thread from an eligible pool. Thus, it checks the eligible pools and dispatches the request onto an available service thread of an eligible pool or puts the request on a global queue).

**In reference to claim 9,**

Doolittle does not disclose each of the N two-phase commit protocol operations are associated with a first phase of a two-phase commit protocol. However, this limitation is disclosed in the article Parallel Execution Oracle8i Concepts Release 8.1.5.

**(Original): The method of claim 6 wherein each of the N two-phase commit protocol operations are associated with a first phase of a two-phase commit protocol** (inherent; a two phase commit protocol operation has a first phase and a second phase that it must complete in order to complete the operation. The operations are also done individually in parallel (see article Parallel Execution Oracle8i Concepts Release 8.1.5, see page 36, Section Transaction Model for Parallel DML, subsection Two Phase Commit, A parallel DML operation is executed by more than one independent parallel process transaction. In order to ensure user-level transaction atomicity, the coordinator uses a two phase commit protocol to commit the changes performed by the parallel process transaction). So, each operation must be associated to the first phase of the two phase commit protocol).

It would also be obvious to one skilled in the art that the two phase commit protocol is associated with the first phase of the two phase commit protocol. It was known at the time of the invention by one of ordinary skill in the art that the two phase commit protocol consists of two phases, the prepare and the commit phase. It would be obvious that the two phase commit protocol operation is associated and must execute the first phase in order to complete the two phase commit protocol operation.

**In reference to claim 10,**

Doolittle discloses:

**(Original): The method of claim 6 further comprising:**

**reporting results of the first and second two-phase commit protocol to a log** (see paragraph 0054, state of request can include completed, failed or cancelled).

### ***Response to Arguments***

**In reference to claim 1:**

Applicant's arguments have been considered. The previous rejections have been withdrawn.

New references disclosing each limitation of the claim have been included.

**In reference to claim 6:**

Applicant's arguments have been considered. The previous rejections have been withdrawn.  
New references disclosing each limitation of the claim have been included.

**In reference to claims 2-5 and 7-10:**

Applicant's arguments have been considered. The previous rejections have been withdrawn.  
New references disclosing each limitation of the claim have been included.

***Conclusion***

Applicant's arguments were considered. Accordingly, previous rejections have been withdrawn. New grounds for objections and rejections have been provided. **THIS ACTION IS NOT MADE FINAL.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti D. Dave whose telephone number is 571-270-1470. The examiner can normally be reached on 7:30 AM to 5 PM Mon-Fri, Alt Fri. Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jyoti D Dave/  
Examiner, Art Unit 2191

4/11/2008

*/Wei Zhen/*

***Supervisory Patent Examiner, Art Unit 2191***